

ORGANIZATIONAL STRUCTURE FOR THE MANAGEMENT OF EMERGENCY MEDICAL SERVICES – MILWAUKEE FIRE DEPARTMENT

EXECUTIVE DEVELOPMENT

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Appendices C through F Not Included. Please visit the Learning Resource Center on the Web at <http://www.lrc.dhs.gov/> to learn how to obtain this report in its entirety through Interlibrary Loan.

ABSTRACT

This applied research project examined the organizational structure for the management of emergency medical services in the Milwaukee Fire Department. The problem is that the Milwaukee Fire Department – Bureau of Emergency Medical Services' organizational structure has not changed to manage the department's responsibilities related to providing emergency medical services. The purpose of this research paper was to determine how the Milwaukee Fire Department – Bureau of Emergency Medical Services' organizational structure must change to manage those essential functions of a diversified, fire based, emergency medical services system.

This research project employed the action research method to answer the following questions:

1. What emergency medical service functions is the Milwaukee Fire Department – Bureau of Emergency Medical Services responsible for managing?
2. What changes must the Milwaukee Fire Department implement to address the management of these functions?
3. What human resources are required to manage these functions?
4. What are the roles and responsibilities of management personnel?

The research procedures used in preparing this paper included a literature review of written documents related to the subject of EMS management and organizational structure, a review of Milwaukee Fire Department documents relative to managing EMS, and a survey of fire departments nationally to determine organizational structure employed in the management of emergency medical services.

The study found that the Milwaukee Fire Department lacks sufficient management staff to manage all essential elements of a quality EMS system. The literature review for this paper identified those essential elements. The survey of other departments indicates a commitment of staff to address the management of those same identified elements.

Research for this paper supports the recommendation that the Milwaukee Fire Department – Bureau of EMS incorporate the positions of EMS Instructor Coordinator, EMS Continuous Quality Improvement Coordinator, and EMS Public Information/Education/Public Relations (PIER) Coordinator into the organizational structure of the bureau.

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INTRODUCTION

The Milwaukee Fire Department (MFD) has served as an emergency medical service (EMS) provider to the City of Milwaukee since the 1920's. In the early years of EMS the Milwaukee Fire Department's responsibilities were confined to providing first response "first aid" services and limited patient transport to the hospital. By today's standards, those operations would be described as a crude pre-evolutionary form of emergency medical services. Training of EMS personnel, licensing of transport vehicles, and defined operational protocols were yet to be regulated by the fire department, the state, or federal agencies. Emergency medical services were a fraction of fire service responsibilities, too small to be calculated. Management of such services was absorbed into the day to day operations of the MFD. Snook (1988) described early EMS management in the fire service as follows:

Fire services of the past which were singularly focused (fire suppression) could function under a simple traditional organizational structure. Efficient performance at the emergency scene was the criterion of success, and the organizational structure was designed to achieve it. Thus, the fire company became the basic building block of the fire service. (p.55)

Today, the Milwaukee Fire Department is the primary provider of emergency medical services to the City of Milwaukee. The responsibilities associated with providing this multi-faceted service have multiplied as EMS has emerged as a major function of the Milwaukee Fire Department. In addition to day to day EMS operations, the department must address issues related to governmental regulation, training, public education, customer service, and continuous quality improvement.

Sachs (1999) wrote that fire departments participating in EMS must have specific programs in place to support the EMS system. These include a quality assurance program, an infection control program, a health and safety program, and a public information, education, and relations program (p.79). Oversight of such programs requires a trained and dedicated staff, in sufficient numbers, to guarantee a quality service.

The problem is that the Milwaukee Fire Department – Bureau of Emergency Medical Services' organizational structure has not changed to manage the department's responsibilities related to providing emergency medical services.

The purpose of this research paper is to determine how the Milwaukee Fire Department – Bureau of Emergency Medical Services' organizational structure must change to manage emergency medical services.

The action research method was employed to answer the following questions:

1. What emergency medical service functions is the Milwaukee Fire Department – Bureau of Emergency Medical Services responsible for managing?
2. What changes must the Milwaukee Fire Department implement to address the management of these functions?
3. What human resources are required to manage these functions?
4. What are the roles and responsibilities of management personnel?

BACKGROUND AND SIGNIFICANCE

The Milwaukee Fire Department has been in the business of providing emergency medical services to the City of Milwaukee for the past eighty years. In 1977 the Milwaukee Common Council, via resolution, designated the MFD as the primary provider of emergency medical services to the City (Hawthorne, 1995, p. 30).

The 1977 Federal Highway and Safety Act had a significant impact on the provision of emergency medical services in the United States. The new law set standards regarding the education of deliverers of service, type of equipment carried on response units, communication equipment, type of units used for patient transport and service medical direction (IAFF, 1999, p.5). The State of Wisconsin Department of Health and Human Services adopted the federal guidelines as Administrative Code and began enforcing them statewide (Murawsky, 1996, p.3).

Following the legislation of the 1970's the City of Milwaukee began to shape the system of emergency medical services that would serve its citizens to this present day. The Milwaukee Fire Department assumed the role as a first responder, providing EMS with licensed emergency medical technicians responding with fire fighting apparatus. Private ambulance providers operating under a service agreement with the City of Milwaukee provided basic life support (BLS) transport. Management of the MFD's emergency medical services was provided by the department's existing management structure. MFD management of EMS operations focused on training of personnel to the EMT-Basic level and onscene operational management of personnel by company officers.

The growth of EMS in the fire service and the increasing trend to provide the highest level of medical attention led to the development and implementation of a paramedic advanced life support (ALS) program within the department. In 1979 personnel were trained and paramedic response units were placed into service. In 1982 the MFD established an EMS Division with management oversight delegated to a newly formed position of Battalion Chief – EMS Coordinator. This position was created to address a growing need to provide full time, upper level management of EMS operations. Jackson (1986) defined the duties of the Battalion Chief to include management of all ALS personnel, development of an EMS budget, coordination with private providers, special event coverage, and EMS equipment procurement (p.1). This evolution represented the first change in the department's organizational structure addressing the management of emergency medical services.

In 1984 the Battalion Chief – EMS Coordinator proposed the addition of three supervisory positions to the EMS Division. Battalion Chief Norman Wichman (personal communication, May 16, 1984) expressed concerns for the increasing management challenges faced by the EMS Division in a letter to the chief of the department.

It has become increasingly difficult to provide the consistent and close supervision that is needed to assure quality patient care, given the current staffing level and number of units operating in the Milwaukee Fire Department emergency medical service system. In addition, the EMS Coordinator does not have a staff with which to manage the many complex problems that arise on a daily basis. Therefore, it is my recommendation that the positions of "Medical

Service Officer” be appointed to provide inservice training, medical reports review, Paramedic Officer review and general efficiency. (p.1)

On July 27, 1984 the City of Milwaukee Common Council approved the positions of one Paramedic Captain and two Paramedic Lieutenants to provide supervision of ALS personnel and activities. These paramedic officers were assigned to a twenty-four hour shift (one per shift) and performed as shift supervisors for ALS activities. In 1987 the positions were restructured and currently exist as three Paramedic Lieutenants.

In 1986 the Milwaukee Fire Department successfully petitioned the Fire and Police Commission to elevate the position of Battalion Chief – EMS Coordinator to Deputy Chief – EMS Coordinator and create the Bureau of Emergency Medical Services within the organizational structure of the department. The Bureau of EMS became the sixth bureau within the department’s Support Division opposite the department’s Fire Fighting Division.

The demands associated with the provision of emergency medical services continued to grow throughout the 1980’s as the department’s EMS workload represented seventy percent of the department’s responses. In 1991 the department assigned an administrative Battalion Chief to the Bureau of EMS to assist the Deputy Chief with EMS management. In 1992 Fire Chief August Erdmann requested that the Battalion Chief position be permanently assigned to the Bureau of EMS as the Assistant EMS Coordinator. In a written request to the Fire and Police Commission Erdmann (A. Erdmann, personal communication, January 22, 1992) cited the increased workload and responsibilities on the Bureau of EMS and its only staff person, the Deputy Chief – EMS

Coordinator. Also stated was the need to create a promotional ladder within the department for paramedics (p.2).

Since 1992 the Milwaukee Fire Department's Bureau of EMS has not seen a change in organizational structure. The current structure of the Bureau consists of one Deputy Chief – EMS Coordinator, one Battalion Chief – Assistant EMS Coordinator, three Paramedic Lieutenants, and one office assistant (Appendix E).

In the last decade the workload on the Bureau of EMS has continued to increase significantly. EMS currently comprises eighty percent of the department's response activity. The number of advanced life support units have increased to eight, and the department has instituted paramedic engine companies. In 2000 the department assumed a role in the provision of BLS transport with four full time BLS transport units. Additional responsibilities include an increased presence at special events, the lead role in the city's Metropolitan Medical Response System (MMRS) - response to terrorism, and fire fighter recruit EMS training.

The Milwaukee Fire Department's Bureau of EMS management staff has been forced to address day to day EMS operational needs of the department at the expense of addressing critical elements associated with a quality EMS system. In an analysis of the City's EMS system Murawsky (1996) states that the system has deficiencies in what are considered essential elements of a quality integrated EMS system. Among these elements are a public information, education and public relations program, data collection and analysis, a continuous quality improvement program, and a coordinated EMS training program (p.1). To date, the implementation or growth of these programs has not been realized. The Milwaukee Fire Department must examine the current

organizational structure of the Bureau of EMS to determine how these elements are to be addressed and what resources are needed to accomplish the task. The failure to examine these issues leaves the department on an undirected course where EMS concerns are addressed only as they occur and the evolution of a quality EMS program remains incomplete and vulnerable to criticism.

Researching organizational change in the fire service is directly related to the Executive Fire Officer Program course Executive Development. The Executive Development course focuses on leadership, managing creativity, and service quality, all elements necessary to identify issues and effect change in an organization. Effectively managing EMS in the fire service requires constant evaluation and review. The result of this research will provide a focus for implementing change in the Milwaukee Fire Department and a source of information for other fire based EMS systems.

LITERATURE REVIEW

The review of literature for this research project focused on topics relative to the management of emergency medical services and the development of appropriate organizational structure for effective leadership. The majority of literature reviewed consisted of fire and EMS textbooks, EMS journals, and federal publications. The topics addressed in this review include the components of an EMS system, organizational structure for the management of EMS, goals and designs of an organization, rank structure in the organization, and job analysis.

Components of an EMS System

The growth of emergency medical services over the past 30 years, especially within the fire service, has fostered continued analysis as to what an integrated, broad-based, quality EMS system must provide. Over the years, many groups of EMS professionals have convened to discuss the simple definition of an EMS system, and the essential components that must be addressed in providing emergency medical care to a community.

In 1993 the National Association of State EMS Directors (NASEMSD) and the National Association of EMS Physicians (NAEMSP) ratified a joint position statement describing an EMS system. The EMS system was defined as “a comprehensive, coordinated arrangement of resources and functions which are organized to respond in a timely, staged manner to targeted medical emergencies, regardless of their cause and the patient’s ability to pay, and to minimize their physical and emotional impact” (Sachs, 1999 p.23).

The United States Fire Administration (1992), in a report to the National Forum on Emergency Medical Services, describes an EMS system as a comprehensive and coordinated arrangement of both health and safety resources which must serve to provide care to victims of sudden illness and injury in a timely and effective manner (p.5).

In 1996 the National Highway Transportation Safety Administration (NHTSA) examined the growth of EMS and the critical need to assess the future of the entire emergency health care system. NHTSA (1996) provided an updated definition of an EMS system in which EMS will be integrated with the entire health care industry. The

EMS system of the future will not only focus on the treatment of illness and injury, but will work through the community to reduce incidents, contribute to treatment of chronic illnesses, and participate in public health monitoring (pp. 2-3).

In addition to defining an EMS system, management of the system requires a need to identify the critical components of the system that must be addressed in order to provide quality service. Those critical components are constantly revised, but once identified, serve as benchmark functions of any EMS system.

The International Association of Firefighters (1999) has identified the elements of an EMS system to include “human resources, medical direction, legislation and regulation, education systems, public education, prevention, public access, communication systems, clinical care, information systems (data collection), and evaluation”(p.5).

The NHTSA (1996) defined fourteen EMS system components. These components are:

1. Integration of health services
2. EMS research
3. Legislation and regulation
4. System finance
5. Human resources
6. Medical direction
7. Education systems
8. Public education
9. Prevention

10. Public access
11. Communication systems
12. Clinical care
13. Information systems
14. Evaluation. (pp.3-4)

Sachs (1999) comments that it is within these fourteen components that the fire service can recognize its greatest opportunity to have an impact on EMS, improve community health, and serve the citizens of the community to the fullest (p.107).

The American Ambulance Association (1994) refers to “the hallmarks of quality EMS” and defines the path to the continuous pursuit of clinical excellence to include:

1. Employee training and certification programs
2. Quality assurance/improvement programs
3. State of the art equipment
4. Career opportunities for EMS personnel
5. First responder program integration
6. Community education programs. (p.13)

Maniscalco (2000) identifies those issues that are paramount to any fire department engage in the business of providing EMS to a community. Those issues are described as the development and implementation of safety initiatives for members, the enhancement of existing services to provide a more effective level of operation, development and implementation of strategies for public education and community relations, pursuit of creative funding alternatives, budget strategies for greater efficiency, development of capable staff, resources and accountability, and addressing

the impact of such matters as curriculum changes and HCFA reimbursement rates (pp.7-8).

Organizational Structure for Managing EMS

The growth of EMS within the fire service has forced many fire departments to re-examine its organizational structure for the management of emergency medical services. The management of EMS in the early stages of fire-based services leaned heavily on the existing managerial structure which had existed in the fire service for years. In many cases, fire departments assumed EMS responsibilities without considering the need to address EMS management as a separate entity or operation within the department. EMS started in the fire service as a part time job, but quickly grew into a full time business, in many cases before a department realized the impact and demands that it was having on the organization. Fitch (1988) states that over the years fire/EMS leadership has not paid attention to the changing times of the business (fire based EMS) and unfortunately, with few exceptions, the fire service has remained “asleep in the locker room” while the game was being played (p.4).

Page (1988) notes that a lack of a defined EMS management structure leads to a crisis-oriented approach that leaves the department without guidance in dealing with the day to day ebb and flow of interrelationships. This approach places the EMS manager in the role as a messenger of crisis and reaction between the fire department and the other elements of the system (p. 376).

The need for fire departments to address the management of its EMS component was emphasized in a position paper by the National Association of State EMS Directors

and the National Association of EMS Physicians. The paper raised concerns that fire departments providing EMS often put a greater emphasis on fire fighting operations, even though the majority of their emergency response activity is EMS related. The paper makes the following point:

When EMS, at any response stage, is provided by an agency or institution that also provides non-EMS services, the role and responsibilities of that agency or institution as a sub component of the EMS system must not be jeopardized by its non-EMS roles and responsibilities. Quality patient care will depend upon total commitment to the development and operation of an integrated and comprehensive EMS system. (Sachs, 1999, p.26)

An organized and coordinated structure for the management of EMS is critical to the fire service. EMS is a competitive business in which the fire service must vie with the private sector to remain as the primary provider of emergency health care services in the community. The inability to effectively address all dimensions related to the delivery of EMS results in a poor quality of service that will ultimately destroy the role that the fire service plays in this business. Maniscalco (2000) notes that the delivery of emergency medical care to the public has become too important to allow ineffective services to exist, or to be placed in the hands of an organization that does not place a high priority on the provision of EMS. These types of organizations jeopardize the level of service and safety to a community by continuing to provide substandard service due to poor or uncommitted leadership (p.7).

The fire service must make a concerted effort to examine its approach to managing emergency medical services. In most cases this will involve some change

from traditional techniques and a reorganization of department management structure. Page (1988) makes the point that “the provision of EMS usually involves some reorganization of existing roles, territories, and procedures. The comfort and security of tradition and status quo are often disturbed by the organization and operation of the EMS system” (p. 375). Page (1988) states that the success of coordinating the system will determine the relative success of the entire EMS system in reaching its performance goals (p. 375).

Design of an Effective EMS Organization

A delineated, well-defined organization is essential for the management of emergency medical services in the fire service. The fire service has operated under an organizational design since its inception; however, the emergence of EMS as a primary function of the fire department requires a reexamination of organizational structure and the probable realization that change within the structure is necessary. Understanding the goals of organizational structure is the first step in the change process.

Altman (1977) states that an organization exists to accomplish various goals and objectives in a manner that is more efficient than individuals working alone. The process of defining the organization consists of assigning duties and coordinating the efforts of members to ensure maximum efficiency in attaining goals. The structural arrangement that is ultimately determined should be derived from strategic concerns and should facilitate goal accomplishment (p. 6).

The design of a formal organization must consider the tasks, which must be accomplished and the specific individuals responsible for achieving those goals. Snook

(1988) notes that the organization provides a framework for establishing relationships among the different component parts, assigning tasks to specific individuals according to their skills and specialties, and coordinating activities of these components to achieve the goals of the organization. "Characteristics of the organization include authority and influence, responsibility, accountability, unity of command, span of control, and delegation" (p. 55).

Altman (1977) describes the design of the organization as a process in which leaders create a structure of tasks and authority.

The process is decision making through which leaders evaluate the relative benefits of alternative tasks and authority structures. Structure refers to the relatively fixed relationships, which exist among the jobs in the organization, and results from a decision process that considers job definition, departmentalization, span of control and delegation. (p. 9)

Paramount to the growth of an EMS organization is the development of an organizational chart. The organizational chart not only depicts the structure of the entire organization, but also clearly defines the placement of EMS management within the overall structure. The Commission on the Accreditation of Ambulance Services (CAAS) (1993), in describing the standards for the accreditation of ambulance services, states that a written organizational structure (chart) is required to assure that the organization is managed effectively and efficiently and so that lines of responsibility and authority can be clearly delineated (p. 3). Altman (1977) concludes that the purpose of the organizational chart is to present in graphic form the major functions and lines of authority of an organization at a given time. In addition, the organizational chart

describes the nature of the structure, reporting relationships, and frequently the flow of functional authority (p. 17). Altman (1977) further states that the chart identifies such factors as the span of control, number of hierarchical levels, extent of delegation and job specialization, and type of organization (line-staff, functional etc.)(p. 18).

The organizational chart of a fire department is also important in identifying not only the roles of upper level managers, but also the roles of intermediate and lower level supervisors within the structure of EMS operations. CAAS (1993) states that

the organization must have an organizational hierarchy that incorporates sufficient intermediate supervisory personnel to provide the administrative officer an effective span of control. The management and supervision team must demonstrate an overall unity of command with clearly demonstrable lines of authority and responsibility going up and down the organizational chart so that every individual is answerable to only one superior, and through him/her, ultimately, answerable to the principle administrative officer. (p.3)

Rank and Authority in the EMS Organization

The design of the EMS organization within the fire service not only addresses the issue of what roles and responsibilities must be assumed by designated personnel, but also what rank and level of authority these individuals are to possess. The issue of rank and authority is seldom an issue in the traditional hierarchy of fire services. The roles and responsibilities along with commensurate rank have been established over the history of a department.

When EMS emerged as a major component of the fire service, and developed as an integrated partner in the operational structure, the question of rank within the EMS structure fostered many debates. Questions are raised as to how the EMS structure is to parallel the fire fighting division. The United States Fire Administration (1997) states that expanding a fire department mission to include the additional responsibilities of providing EMS requires addressing how the EMS function will be supervised and how existing and new supervisors will be integrated into the command structure of the department. The United States Fire Administration notes that

it may be necessary to develop a command structure for EMS parallel to that used for fire suppression, or EMS supervision may be integrated into the existing fire department command structure. This will largely depend on the size of the department and the volume of EMS calls it answers. (p. 89)

Sachs (1999) concludes that it is important that fire and EMS managers of equal responsibility and accountability have equal authority. Without equal authority it will be much more difficult to gain an equal degree of respect from the organization (p. 129).

The National Fire Protection Association (1981) states that many times individuals are given responsibility of performing certain tasks but are not given the authority to make decisions necessary to complete the tasks. This restricts the performance of the organization since these individuals must constantly consult supervisors when decisions are to be made. When responsibility is assigned, authority must also be granted (p. 146). Page (2000) echoes this by stating that authority must always be commensurate with responsibility. "To give an individual the responsibility to

achieve a goal or accomplish a task, but fail to give that person the necessary authority to follow through creates a recipe for failure” (p.18).

Page (1988) notes that when a fire department assigns one of its members to coordinate its EMS functions with the rest of the EMS community, it is essential that that individual possess authority commensurate with responsibility (p. 375).

In the traditional fire service organizational structure, rank and authority go hand and hand. The designation of a particular rank carries with it the authority to accomplish specific tasks and to supervise others in the course of attaining those task goals. Snook (1988) states that authority is derived from a member's formal position within the organization. “This authority provides a foundation from which procedures, policies, and practices are designed and implemented among organization members. The fire service has utilized legitimate power (authority) as a primary principle on which departments have organized themselves” (p. 66).

Designation of rank and authority in the EMS organizational structure presents additional advantages for the organization. One advantage includes the establishment of a lower level of supervision personnel that can be trained to assume positions of greater responsibility in the future. Snook (1988) states that clearly defined authority and responsibility not only represents a basic organizational principle, but also assists the organization in developing the membership. Assigning authority and responsibility helps to establish lines of communication, functions as a means to measure performance levels, provides promotional opportunities for personnel, and serves as a means for recognition and reward (p.66).

A second advantage to establishing rank and authority is the ability to provide an identified and defined promotional ladder for EMS trained personnel. Sachs (1999) notes that rank and position description should include criteria that clearly defines training, experience, prerequisites and responsibilities. The job description should explain fully the department's career advancement ladder. "It is important to plan the career advancement of fire and EMS officers even if such advancement is not immediately necessary for initial implementation or enhancement of EMS, as the advancement process is an important motivator for personnel" (p.130).

Polsky (1992) goes so far as to identify the positions necessary for the implementation of EMS management. These positions within the organizational structure are to include,

1. Chief Executive Officer – Deputy Chief
2. Chief Operations Officer – Battalion Chief
3. Field Operations Officer
4. Quality Improvement Officer
5. Training/Education/Public Relations Officer. (p. 329)

EMS Position Classification and Job Analysis

The management of emergency medical services requires a defined organizational structure. Within that organizational structure it is important to define each position and the responsibilities associated with that job. This process requires a job analysis, the development of job descriptions, and a position classification for each designated responsibility. Newkirk (1984) notes that once the organizational chart has

been developed, the service needs to determine how each job fits within the organization. This requires the writing of meaningful job descriptions, determining how many positions are needed, and training the necessary personnel (p. 70).

In addressing the job analysis process Newkirk (1984) states that the following questions must be examined.

1. What key activities are to be addressed by this job based on organizational goals.
2. What can be expected for results, and how will they be measured.
3. What will the person have to do to achieve results? What are they responsible for? Whom do they supervise?
4. What education and experience would be relevant and helpful in achieving success in the job?
5. What specific abilities are necessary for this job (public speaking, writing, supervising etc.)? (p. 72)

Matzer (1988) describes job analysis as a “means of identifying the skills, behavior, knowledge, and abilities employees need to perform a job successfully” (p. 262).

Following the analysis of a job, it is extremely important to develop a useful, up to date, and detailed written document that serves as the job description for the position. Clark (1995) states that writing a job description requires serious consideration as to the duties and standards that are expected of the staff. A service must organize personnel so as to accomplish specific objectives. Failure to organize the staff causes employees to squander energies in activities that have little or no bearing on the results that are desired by the organization (p. 2).

A position classification process is necessary in the development of the organizational structure for managing EMS. Once the positions are determined, and job descriptions are written, it is necessary to determine how those positions compare to existing positions within the traditional organizational structure of the department. Matzer (1988) notes that position classification is a system of grouping similar positions under common job titles on the basis of the kind of work performed, the level of difficulty and responsibility, and the qualifications that are required. Position classification serves as the basis for pay, selection, promotion, performance evaluation, and training (p. 261). A position classification process will assist in the determination of rank for each position within the EMS organization. The rank should be consistent with other positions in the department in the same class. Matzer (1988) states that “a class is a group of positions that are similar in duties and responsibilities, require approximately the same qualifications in education and experience, can be filled through similar testing procedures, and can be assigned the same job title and salary” (p. 262).

Position Descriptions

Several important functions have been identified as essential to the management of emergency medical services. These essential functions include quality assurance/continuous quality improvement, EMS training, and public information/education/public relations. Literature on these essential functions bears review because of their significance to the management of emergency medical services within the Milwaukee Fire Department.

Quality Assurance/Continuous Quality Improvement

Quality assurance/continuous quality improvement (CQI) is a vital function of all EMS systems. The need for a quality improvement process is necessary to insure that the services provided to the community maintain the highest standard of excellence. The CQI process also insures that employees are well trained and carry out their duties to an established level of performance. Sachs (1999) states that “one of the basic tenants of medicine is that treatment modalities are under constant review to ensure that patients are receiving the finest possible care. These efforts are often referred to as quality assurance, quality improvement, or continuous quality improvement” (p.79).

Johnson (1992) states that the concept of CQI in EMS involves the responsibility of continuously examining performance in the system to see where both the personnel and the system itself can continue to improve. The theories of CQI not only look at what was done wrong, but also at what was done right so that lessons can be learned from both (p. XI).

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) divides quality assurance/CQI into three components. These components consist of standards, indicators, and thresholds. Standards, such as medical protocols, define the expectations as to how a given service should be delivered. Indicators measure the performance of the system and personnel against the standards. Thresholds define quality by establishing limits of compliance with indicators. Simply stated, quality assurance systems manage quality by measuring the frequency with which particular standards are met (Sachs, 1999, p.79).

Quality assurance/CQI is often divided into three phases. Johnson (1992) describes these as

- Retrospective – looking back at an incident and identifying areas for review. Patient care audits identify improper care and how to improve it.
- Concurrent – involves field observation/audits. This phase can identify issues not obvious in retrospective audits.
- Prospective – analyzing performance expectations and whether the EMS system and its personnel consistently meet those expectations. Seeks to identify the operating parameters of an EMS system. (p. 5)

Quality assurance/CQI is a process that must be addressed by the EMS system management. It is a vital function that requires full time attention if all three phases of the process are to be adequately addressed. Swor (1993) notes that “in EMS systems, CQI demands an integrated approach to quality, involvement of the entire organization, empowerment of front-line personnel, and commitment of management” (p. 52).

EMS Training

Training of EMS personnel is an important component of any fire based EMS system. Forsman (1988) states that fire department training must maintain a focus on results. A particular emphasis must be placed on producing competent human resources, competent work units, and a competent organization. Training towards these objectives requires quality training programs that create and maintain excellence (p. 169). NHTSA (1996) declares that

as EMS care continues to evolve and become more sophisticated, the need for high quality education for EMS personnel increases. Education programs must meet the needs of new providers and of seasoned professionals, who have a need to maintain skills and familiarity with advancing technology and the scientific basis of their practice. (p. 31)

EMS training would appear to be broken into two components; training to achieve a level of national certification, and in-house training that is tailored to the EMS operations of a specific department.

Training for national certification, whether provided by an academic institution or by the fire department, follows a standardized curriculum. These programs allow for only small variances in training topics and material. The remainder of department specific in-house EMS training must occur outside of these programs.

Specific in-house EMS training must be conducted to ensure that personnel are competent in performing in accordance with a department's standard operating guidelines, are trained to interact operationally with other fire based non EMS emergency operations, and are trained in the use of the latest EMS equipment.

In-house training, provided by knowledgeable department personnel, must be a critical element in providing an integrated approach to the delivery of both fire and EMS operations. Sachs (1999) states that fire and EMS training should overlap. From an operational standpoint, when all personnel are trained the same way, things tend to run more smoothly. The importance of overlapping fire and EMS training can be seen in such operations as fire fighter rehab, auto extrication, haz/mat, and mass casualty operations (p. 26).

EMS training must place a special focus on personnel in the recruit training phase of their career. Department specific EMS training must be integrated with national certification training programs. Michos (1998) notes that since recruit training is the most impressionable period in the individual's career, the entire training experience should reinforce EMS as a primary component of the recruit's future assignments (p. 32).

Public Information/Education/Public Relations (PIER)

Public information, education, and relations programs (PIER) have come to be recognized as an important component of a successful EMS system. Such programs are similar to fire education and prevention programs but specifically address EMS issues. Michos (1998) notes that since the mission of most fire departments focuses on fire prevention and suppression, the prevention component should be expanded to include injury prevention and community safety (p. 32). Kraakeel (1997) states "in the future, the success of EMS systems will be measured not only by the outcomes of their treatments, but also by the results of their prevention efforts" (p.33).

Sachs (1999) states that PIER programs provide the means for promoting an EMS system, developing positive public attitudes about EMS, and informing the public on specific EMS issues. Public education programs teach "functional knowledge and skills as a means of modifying behavior" (p. 87).

PIER programs, as implemented in fire based EMS systems, focus on such areas as injury prevention, citizen CPR, use of automatic external defibrillators, and the appropriate ways to call for medical attention. All of these programs involve the

participation of EMS personnel, working with the public, to develop an integrated EMS system that focuses on the provider and the community as a means of improving the effectiveness and efficiency of the EMS system. Education of the public regarding personal health care and injury prevention can greatly reduce the incidents in which the emergency medical system must be activated, and improves the overall health of the community (IAFF, 1999, p. 8).

PROCEDURES

The research procedures used in preparing this paper included a literature review of written documents related to the subject of EMS management and organizational structure, a review of Milwaukee Fire Department documents relative to managing EMS, and a survey of fire departments nationally to determine organizational structure employed in the management of emergency medical services.

Literature Review

The researcher used the resources of the National Fire Academy (NFA) Learning Resource Center (LRC) to identify books, reports, and articles in trade journals and periodicals pertaining to the management of fire based emergency medical services. Research materials were obtained from the LRC while onsite for Executive Fire Officer training. Use of the LRC's online card catalog facilitated this search while off site. A local public library was utilized to obtain literature through the interlibrary loan program.

The Milwaukee Fire Department literature library was used to reference several current publications by EMS based organizations. The department administrative files

were reviewed for historical documentation on the department's evolution into emergency medical services.

The researcher also utilized the Internet to access documents pertaining to EMS management.

Survey

The research for this paper involved the dissemination of a survey to fire departments throughout the United States. The purpose of the survey was to determine organizational structure, personnel, and job responsibilities related to the department's management of emergency medical services. The survey (Appendix B) consisted of four questions which were intended to provide background information as to the level of EMS services provided by the department. In addition, a request was made for information relative to the organizational structure utilized by the department for the management of emergency medical services. A table was included for documentation of positions and responsibilities of personnel assigned to EMS management. A copy of the department's organizational chart and job descriptions of EMS personnel was also requested.

Survey Dissemination

The surveys were sent by U.S. mail to the heads (Fire Chief, Fire Commissioner etc) of the various departments on November 1, 2001. The survey was accompanied by a cover letter (Appendix A). The letter detailed the intent of the survey and explained that the survey was to be used to provide information for an applied research project

related to the Executive Fire Officer Program. The letter expressed that the surveys be returned by November 26, 2001.

Survey Population

Surveys were sent to twenty-eight fire departments throughout the United States. Departments were chosen based on close comparison to the City of Milwaukee Fire Department. Criteria used to determine survey population focused on population of the city, number of sworn personnel, and department involvement in the provision of emergency medical services. The *National Directory of Fire Chiefs and EMS Administrators* (2001, 10th Edition) text was used to identify these cities.

Sixteen of the twenty-eight surveys were returned (57.1%). Three of the returned surveys contained incomplete information. Two additional surveys indicated that emergency medical services were provided to the city by a service separate from the fire department and contained insufficient information.

Proposed MFD Organizational Chart

A proposed organizational chart for the Milwaukee Fire Department was developed to reflect the results of this research paper (Appendix F). The proposed changes for the Milwaukee Fire Department Bureau of EMS are represented in the organizational chart. Visio 32 software was used to develop the chart.

Assumptions and Limitations

The results of the survey are limited due to the overall response (57.1%). A greater response would have provided a larger pool of data for interpretation.

RESULTS

The results of this research will focus on the survey data and literature review to answers the four research questions.

1. What emergency medical service functions is the Milwaukee Fire Department – Bureau of Emergency Medical Services responsible for managing?

The Milwaukee Fire Department (MFD) Bureau of Emergency Medical Services is responsible for the management of all major elements of an integrated, comprehensive EMS system. Identification of these major elements is based on information contained in the literature review as well as data obtained in the survey of fire departments similar in size to the MFD.

Research indicates that there are consistent elements of any EMS system that require management. The MFD, being a primary provider of emergency medical services to the City of Milwaukee, must successfully manage each of those elements. These elements have been described by several sources including NHTSA (1996, p.3), IAFF (1999, p.5) and the American Ambulance Association (1994, p.13). These organizations have provided parallel documentation in the identification of these elements. The elements include the management of:

- Human resources

- Field operations
- Information systems (data collection)
- Data evaluation, research
- Continuous quality improvement
- Legislation and regulation
- Employee training and certification
- Public information and education
- Personnel safety concerns
- Equipment
- Budget
- Medical direction

The delivery of emergency medical services dictates that these elements be addressed in any organized system. The degree to which they are managed determines the quality of service provided. The MFD Bureau of EMS addresses several of these elements through the positions of EMS Coordinator (Deputy Chief), EMS Assistant Coordinator (Battalion Chief), and Paramedic Lieutenants. Those elements addressed through these positions include field operations, legislation and regulation, budget, and equipment procurement. The remainder of the elements are largely left unmanaged or, management occurs only as needed using a crisis management approach.

The MFD provides a full spectrum of emergency medical services including BLS first response, BLS transport operations, ALS response, and ALS transport operations.

An analysis of survey results indicates that the MFD is significantly similar to other cities in the survey population relative to the level of EMS services provided.

Table 1 shows the percentage of cities surveyed that possess the indicated EMS components.

TABLE 1

COMPONENTS OF AN EMS SYSTEM	PER CENTAGE OF CITIES SURVEYED WITH SYSTEM COMPONENTS
EMS First Response Operations	100%
EMT-Bs	81.8%
BLS Transport Operations	45.5%
EMT-Ps	100%
ALS Transport Operations	90.9%

The survey attempted to identify those elements that are consistently managed by a diversified EMS system. Table 2 indicates the percentage of departments in which personnel are dedicated to the management of these functions.

TABLE 2

MANAGEMENT POSITION	% OF SURVEYED DEPARTMENTS WITH PERSONNEL ASSIGNED TO MANAGEMENT POSITION
Bureau Manager	100%
Bureau Assistant Manager	100%

Field Operations Supervisor	72.7%
Training Coordinator	90.9%
Continuous Quality Improvement	81.8%
Data Analysis	72.7%
Public Info/Education/Public Relations	45.5%
Infection Control	36.4%
Equipment	36.4%
Medical Director	36.4%

In comparison, the MFD has personnel assigned to the positions of Bureau Manager, Bureau Assistant Manager, and Field Operations Supervisor. The MFD lacks personnel to address training, continuous quality improvement, data analysis, and infection control.

2. What changes must the Milwaukee Fire Department implement to address the management of these functions?

The research for this project indicates the importance of a well-defined organizational structure for the management of EMS. The lack of a delineated chain of command with defined positions and responsibilities results in a crisis oriented approach to management (Page,1988, p.376). The MFD Bureau of EMS has functioned on this crisis-orientated approach due to an increase in EMS responsibilities, a lack of defined position responsibility, and insufficient personnel to address all elements of an EMS system. The review of EMS system responsibilities indicates

several management functions that are left unaddressed or under addressed in the MFD EMS organization.

One of the elements of defining an organization involves the development of an organizational chart. Altman (1977) states that the organizational chart serves to define positions, job responsibilities, lines of authority, and span of control (p. 17). Each identified position within the organizational chart requires a written job description based on a thorough analysis of the responsibilities assigned to each position.

In order to address the management of emergency medical services the MFD must change the organizational structure currently in place. The positions of EMS Coordinator and Assistant EMS coordinator must be reviewed to determine the specific responsibilities delegated by the department to each position. Following a job analysis of each position, a written job description must be developed.

An analysis of each of the current positions assigned to the Bureau of EMS must consider the management of those critical EMS functions as identified by this research. Those elements that are not deemed the responsibility of current positions must be delegated to additional human resources. An analysis of each of those additional management functions is necessary to determine the number of personnel needed to manage the goals and responsibilities of that function. A designated rank, commensurate with the required authority, must be determined for each position.

3. What human resources are required to manage these functions?

The review of literature provided very little insight into calculating human resources necessary for the management of all aspects related to the provision of

emergency medical services in the present day fire-based EMS system. Clark (1995) states that a service must organize personnel so as to accomplish specific objectives (p. 2). Altman (1977) notes that an organization of individuals exists to accomplish various goals and objectives in a manner that is more efficient than individuals working alone. Defining the organization requires assigning duties and coordinating the efforts of members to ensure maximum efficiency in accomplishing goals. Further, the organizational structure should be derived from strategic concerns and should facilitate goal accomplishment (p.6).

The strategic concerns and goals of the MFD Bureau of EMS centers on the management of all critical elements of an EMS system. CASS (1993) states that an EMS organization must have an organizational hierarchy that incorporates sufficient intermediate supervisory personnel to provide the administrative officer an effective span of control (p.3).

In addition to securing the necessary staff to accomplish these tasks, the MFD must consider the need to provide a career ladder for EMS personnel and to insure the development of personnel to assume higher levels of authority and responsibility in the future (Sachs, 1999, p.130). Polsky (1992) simply states that an EMS system should include the positions of Chief Executive Officer-Deputy Chief, Chief Operations Officer-Battalion Chief, Field Operations Officer, Quality Improvement Officer, and Training/Education/Public Relations Officer (p. 329).

The survey provided one measure of the number of human resources dedicated to the management of emergency medical services. Each city included in the survey indicated that the department functioned under an EMS Bureau to manage services

within the fire department structure. Table 3 outlines the number of department personnel dedicated to the Bureau of EMS. In comparison, the MFD has one bureau position for every 183.3 sworn personnel on the department while the next closest city has one position for 151.8 sworn personnel. Departments I, F, and J indicate as many as one bureau staff position for every 62.9, 70.5 and 71.2 personnel respectively.

TABLE 3

CITY	BUREAU OF EMS PERSONNEL PER NUMBER OF SWORN PERSONNEL
Milwaukee	1/183.3
A	1/92.1
B	1/131.3
C	1/81.9
D	1/100
E	1/75.0
F	1/70.5
G	1/101.4
H	1/151.8
I	1/62.9
J	1/71.2
K	1/73.1

The current organizational chart of the MFD (Appendix E) represents the organizational structure of the MFD and details the structure of the Bureau of EMS. The proposed organizational chart (Appendix F) details the human resource changes necessary for the management of EMS based on the research of this paper. The proposed chart shows the inclusion of three additional positions within the bureau. These positions include:

- Captain – EMS Instructor Coordinator
- Captain – EMS Continuous Quality Improvement Coordinator
- Captain – EMS Public Information/Education/Public Relations (PIER Coordinator

The proposed organizational chart includes the addition of two Medical Director positions. These positions currently exist within the department's organizational structure but have never been represented in the department's organizational chart.

The addition of the three positions to the Bureau of EMS provides management oversight to those identified management functions that currently are not addressed in the existing EMS system. The three positions increase the total number of bureau personnel to nine and raises the ratio of bureau staff to sworn personnel to 1/122.2. This figure brings the MFD closer to other departments as represented in Table 3.

4. What are the roles and responsibilities of management personnel?

The roles and responsibilities of management personnel are outlined in the description of an EMS system. USFA (1992) states that an EMS system must provide a comprehensive and coordinated approach, using the health and safety resources of the community, to provide care to victims of sudden illness and injury in a timely and effective manner (p. 5).

It is therefore the responsibility of EMS management personnel to translate that description into the mission and goals of the organization. An analysis of the organization's goals must focus on the incorporation of the essential elements of a quality EMS system. EMS management must coordinate human resources to address those essential elements that include system oversight, personnel training and certification, system finance, continuous quality improvement, data collection and evaluation, public education, and coordination with other health service organizations.

EMS management must develop an organizational structure that provides the appropriate amount of human resources, dedicated to specific responsibilities, and given a suitable degree of authority to accomplish the goals of the organization. Each position in the organizational structure assumes a role in the management of the system and must be supported by a well-defined job description.

DISCUSSION

Relationship between Study Results and Literature

The study identified several essential elements or functions that must be managed by a full service EMS system. Several nationally recognized EMS organizations including the National Highway Traffic Safety Administration (NHTSA), the International Association of Fire Fighters (IAFF), and the American Ambulance Association (AAA) identified those elements. Each of these organizations consistently identified the same essential elements. Sachs (1999) identifies the importance of managing these functions and states that it is through the effective management of these elements that the fire service has the greatest opportunity to impact the delivery of EMS to the community (p. 107).

The survey of fire departments from across the nation indicates that designated personnel within each department manage these same elements. Not including the positions of Bureau Manager and Assistant Manager, the top seven staffed positions within these department's Bureau of EMS address the management of field operations, training, continuous quality improvement (CQI), data analysis, and public education and relations. Polsky (1992) parallels the survey results in noting that EMS management is to include the positions of Chief Executive (Bureau Manager), Chief Operations Officer (Assistant Manager), Field Operations Officer, CQI Officer, and Training Officer (p. 329).

The literature reviewed places a strong emphasis on the need for each department to define its management structure through an organizational chart. In addition, each position contained within the management structure must be defined by a thorough job description. The Commission on the Accreditation of Ambulance Services

(CAAS) (1993) states that a written organizational chart is required to assure that the organization is managed effectively and efficiently and that lines of responsibility and authority can be clearly delineated (p. 3). The majority of surveys returned contained a copy of the department's organizational chart and written job descriptions for each position within the bureau.

The literature reviewed discussed the assignment of rank and authority to positions within the organizational structure. Snook (1988) notes that assigning authority and responsibility to a position establishes lines of communication, functions as a means to measure performance levels, provides promotional opportunities for personnel, and serves as a means for recognition and reward (p. 66). The USFA (1997) states that it may be necessary to develop a command structure for EMS parallel to that used for fire suppression (p. 89). Of the departments surveyed, four had a management structure that spanned 3 levels of command. Six of the departments surveyed had a management structure that spanned four or more levels.

Interpretation of Results

The survey used for this research examined the organizational structure of a large group of fire departments, all comparing closely to the MFD in relation to emergency medical services provided to their respective communities.

The survey results indicate that departments with a diversified EMS responsibility manage a majority of the identified elements of an EMS system with designated management staff personnel. These departments have a bureau staff to sworn personnel ratio much smaller than that of the MFD. This ratio establishes grounds for

the argument that the MFD Bureau of EMS is under-staffed in relation to the surveyed departments.

The departments surveyed portray strong organizational structures that are supported by a diverse rank structure. The rank structure employed by departments to manage EMS supports the reviewed literature by emphasizing the need to attach both responsibility and authority to management positions. The analysis of rank structure is paramount to establishing the organizational structure of any EMS bureau within the framework of a fire based EMS system. The designation of rank within the bureau solidifies the chain of command, establishes an EMS promotional ladder within the department, and insures a continuity of EMS leadership in the future.

Implications for the Organization

The research has numerous implications for the Milwaukee Fire Department Bureau of EMS. Results of the study indicate that for the level of EMS provided by the MFD, the Bureau of EMS must manage those essential elements as identified in the literature and supported by the survey results. Currently the MFD Bureau of EMS manages several of these functions with a staff of six personnel including a Deputy Chief-EMS Coordinator, a Battalion Chief-Assistant EMS Coordinator, three Paramedic Lieutenants, and one Office Assistant. The management functions addressed through these positions have been identified as field operations, legislation and regulation, budget, and equipment procurement. The management of the remaining functions, including training, CQI, data analysis, and public information, education, and public relations (PIER) are either left unmanaged or managed on a crisis oriented approach.

The implications of the results of this study indicate that the MFD Bureau of EMS must examine its current organizational structure and address those identified functions that remain unmanaged. The survey of other departments indicates that these functions are best managed by an expanded staff of personnel dedicated to the Bureau of EMS. The personnel dedicated to the management of these functions assume a defined position and rank within the organizational structure of the bureau.

The results of this study indicate that the MFD Bureau of EMS can best manage all identified functions of an EMS system by expanding the current organizational structure of the bureau. The expansion of the bureau includes the addition of three positions to address EMS training, continuous quality improvement (including data analysis), and public information/education/relations. Based on the need to close the chain of command within the bureau, provide a rank commensurate with the responsibilities, and develop a promotional ladder within EMS, the rank of Captain is to be assigned to these positions.

The restructuring of the MFD Bureau of EMS requires a complete job analysis of the proposed positions and the subsequent development of written job descriptions that define the specific responsibilities assigned to each of the positions. The department's organizational chart is to be revised to represent the addition of the new positions and delineate the chain of command and span of control within the Bureau of EMS. In the completion of the revised organizational chart, the positions of ALS and BLS Medical Director must be added in order to accurately reflect the active role that those positions play in the management of Milwaukee Fire Department emergency medical services.

The changes in the Milwaukee Fire Department organizational structure require the addition of human resources. The addition of human resources to the department presents obvious budget implications. The Milwaukee Fire department will be required to address these changes through the City's annual budget process.

RECOMMENDATIONS

To address the EMS management needs of the Milwaukee Fire Department, the MFD Bureau of Emergency Medical Services needs to implement changes to the current organizational structure.

As determined by the results of this study, the following recommendations are made:

1. To address the management of all essential elements of a quality EMS system the Milwaukee Fire Department should incorporate the positions of EMS Instructor Coordinator, EMS Continuous Quality Improvement Coordinator, and EMS Public Information/Education/Public Relations (PIER) Coordinator into the organizational structure of the Bureau of EMS.
2. To provide a career ladder for EMS personnel, complete the chain of command within the bureau, and provide for future EMS management leadership, the three additional positions should carry the rank of Captain.
3. To ensure that the three additional positions accomplish the specific goal of managing the essential EMS functions as identified in this research, the department should conduct a thorough job analysis of each position. The

result of the job analysis should involve the development of written job descriptions for each position.

4. To direct the duties and differentiate the responsibilities of the current positions of Deputy Chief-EMS Coordinator and Battalion Chief-Assistant EMS Coordinator, the department should develop and adopt job descriptions for these positions.
5. To define the organizational structure of the Bureau of EMS and represent the additional positions in the chain of command, the department should revise the department's/bureau's organizational chart.
6. To accurately represent the role of the ALS and BLS Medical Directors in the management of the department's emergency medical services the department should include both positions in the revised organizational chart.
7. To insure the positive result of this organizational change the department should conduct a periodic evaluation of the Bureau of EMS. Standards should be identified to measure the changes in the quality of service based on the organizational change and identify future organizational goals.
8. To realize the addition of human resources to the current department structure the department should seek the necessary funding through the City of Milwaukee's annual budget process.

Readers that choose to research the topic of organizational change for the management of EMS are encouraged to search for up to date literature on the subject.

Fire department involvement in the provision of emergency medical services is a relatively modern phenomenon and new materials and resources specific to fire-based EMS are being developed daily. The process of surveying departments that provide a diverse range of emergency medical services provides valuable insight into the direction of fire-based EMS management and the human resources required to manage effectively.

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Appendix A

Dear Sir:

Please allow me to introduce myself. My name is Andrew Smerz and I am a Battalion Chief with the Milwaukee Fire Department currently serving as the Assistant Coordinator of Emergency Medical Services. I am presently enrolled in the Executive Fire Officer Program at the National Fire Academy. As part of my four-year education I am required to complete an applied research project following each course. The research project must directly relate to an issue concerning the Milwaukee Fire Department. With the approval of Fire Chief Larry Gardner, I have chosen to research organizational structure for the management of emergency medical services. I have enclosed a survey that is designed to provide me with information about your department's organizational structure related to EMS management. I realize that everyone's time is valuable and surveys are not always popular. Therefore, I have attempted to make the survey short and hopefully very easy to complete. I very much appreciate your cooperation in my research efforts. My goal is to have all surveys returned by November 26, 2001. I have enclosed a self addressed stamped envelope for the return of the survey. If there are any questions regarding the survey, I can be reached at (414) 286-8981. Thank you once again.

Sincerely,

*ANDREW G. SMERZ
Battalion Chief
Milwaukee Fire Department*

Appendix B

EMERGENCY MEDICAL SERVICES SURVEY

Department: _____

Name, title and position of person completing the survey: _____

Phone number of person completing the survey: _____

1. Number of sworn personnel on department _____
2. Total number of fire/EMS/other responses _____
3. Does your department provide emergency medical services? Y N

If yes

- Does your department provide first response basic life support (BLS) services? Y N
 Number of EMT-Bs _____
 Number of BLS responses _____

- Does your department provide BLS transport services? Y N
 Number of units _____

Comments: _____

- Does your department provide advanced life support (ALS) Services? Y N
 Number of EMT-Paramedics _____
 Number of ALS responses _____

- Does your department provide ALS transport services? Y N
 Number of units _____

Comments: _____

4. Does your department have a separate bureau/division to manage emergency medical services? Y N

If yes

- Number of personnel assigned to the EMS bureau/division _____

Survey Continued

- On the attached sheet please list the EMS bureau/division personnel.
Please indicate:
 - Rank
 - number of personnel assigned to that rank/position
 - the type of work shift
 - if the position requires a licensed paramedic
 - the general responsibilities assigned to that position (i.e. bureau/division manager, shift supervisor, training, human resources, public relations/public education, continuous quality improvement etc.

Survey Continued

PERSONNEL ASSIGNED TO THE EMS BUREAU/DIVISION

Rank	# of personnel in this position	Work shift (8 hr, 24 hr etc)	Required to be paramedic trained Y/N	Responsibilities

If possible, please include a copy of your department's organizational chart and job descriptions of any positions assigned to the EMS bureau/division.
Thank You